



**EJP SOIL**  
European Joint Programme

## **Towards climate-smart sustainable management of agricultural soils**

**Deliverable: 3.7**

**Call text of the EJP SOIL 3rd Internal Call**

Due date of deliverable: M28  
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These projects have received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement No. 862695.

## GENERAL DATA

Grant Agreement: 862695

Project acronym: EJP SOIL

Project title: Towards climate-smart sustainable management of agricultural soils

Project website: [www.ejpsoil.eu](http://www.ejpsoil.eu)

Start date of the project: February 1<sup>st</sup>, 2020

Project duration: 60 months

Name of lead contractor: INRAE

Funding source: H2020-SFS-2018-2020 / H2020-SFS-2019-1

Type of action: European Joint Project COFUND

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## Timeline

The Internal Call will follow a 1-step-procedure. There will be a competitive selection. A time schedule is provided below:

Action	Project calendar	Schedule
Call pre-announcement	M26	28 March 2022
Launch of the call	M27	1 April 2022
Webinar for interested applicants	M27	7 April 2022
Workshops for interested applicants	M27	April 2022
Closing date for proposal submission	M28	31 May 2022
Proposal evaluation and selection	M29-M32	June - September 2022
Notification letters sent to project coordinators	M33	October 2022
Grant preparation	M33	October 2022
Start of research projects	M34	November 2022
End of research projects	M57	October 2024

## Partnering tool

For partnering the EJP SOIL WP3 team will launch **Slack Channels** (i.e. topic-specific chat rooms at [www.slack.com](http://www.slack.com)). Access will be granted after sending an e-mail to the Call Office ([EJPCO@maapera.fi](mailto:EJPCO@maapera.fi)). After access has been granted, applicants express their interest to participate and/or coordinate in one or more topic-specific Slack Channels (i.e. a type of chat room). For each topic listed in Table 1 and Annex 2 the partnering tool offers a “chat room” (i.e. “CA2”, “SE6”) and an embedded XLS file used to summarize the information: Who am I? Where do I work? What is my expertise? What is my interest => participation/coordination? Finally, applicants should add their name and interest to participate and/or coordinate into the XLS file.

## Call Office contacts

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## 1 Background of the Call

### 1.1 About the EJP SOIL

The EJP SOIL will maximize the understanding of the contribution of agricultural soil towards achieving sustainability at multiple levels: **i) At the societal level:** raise public awareness and foster understanding of sustainable agricultural soil management and its contribution to food production, climate change adaptation and mitigation; **ii) At the scientific level:** develop new insights on climate-smart soil management, quantify trade-offs and synergies between agricultural production, climate change adaptation and mitigation, maintenance of soil fertility and health and other ecosystem services; gather new knowledge on carbon sequestration in soils under different conditions across Europe and its contribution to climate change mitigation; improve accounting and reporting tools for emission and removals from agricultural activities; **iii) At the operational level:** strengthen the European research community on agricultural soil management; develop harmonized soil information systems and promote their adoption; **iv) At the policy level:** develop evidence-based recommendations for policy makers at EU, national, and regional levels; establish a strategic multi-actor approach and initiate a science-policy-practitioner-society dialogue on agricultural soil health and sustainable agricultural practices to support the adoption of the policy recommendations; foster the uptake of climate-smart sustainable soil management practices by practitioners.

### 1.2 Rationale of this call

As EJP SOIL works on important societal issues in an integrated manner, any innovation developed within the framework of EJP SOIL will meet a societal need and will therefore be relevant for European and global markets. Through its knowledge framework the EJP SOIL supports **knowledge development** through a large number of specific research and innovation projects *via* internal (i.e. WP3 “Internal Calls”) and external EJP SOIL calls. The **overall objective of this 3<sup>rd</sup> internal call** is to fund research projects open to EJP SOIL beneficiaries and linked third parties to fill research and development gaps identified by the “Roadmap for the European Joint Program SOIL”<sup>1</sup> and the annual work program of the EJP SOIL for year three.

### 1.3 Scope and expected impacts and outputs of EJP SOIL

The EJP SOIL contributes to long-term alignment of research strategies in two main ways: **i)** by developing a shared vision, and **ii)** by establishing platforms for networks of soil scientists and other soil stakeholders in Europe. The shared vision will be developed among consortium beneficiaries and will address desirable soil properties and ways to attain them. This process was initiated during the preparation of the proposal and continues with the update of a roadmap for soil research, setting objectives, actions and milestones in the annual programs. Internal calls will foster alignment between the EJP SOIL beneficiaries, linked third parties and important players of European research in the areas of agricultural sciences, ecology, soil and

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<sup>1</sup> Keesstra et al. 2020. Roadmap for the European Joint Program SOIL: Towards climate-smart sustainable management of agricultural soils (Deliverable 2.4)



climate sciences. To facilitate relevant knowledge development the EJP SOIL will perform **research projects**:

**Research projects** will answer a research question or a set of research questions. A Research Project must include a description of a defined protocol, clearly articulated goal(s), defined methods and outputs, and a defined start and end date.

Evaluated and selected research projects of 3<sup>rd</sup> internal EJP SOIL call will get funded after validation by the Board of Project Managers; for more details see section 4.3 of this document.

## 2 Call topics

Project consortia should apply to one of the following EJP SOIL topics:

*Table 1: Targeted EJP SOIL topics of the 3<sup>rd</sup> internal call; project size, number of projects that can be granted and available funding are also provided. For detailed description see Annex 2 of this document. Project size is explained in detail in section 4.3.*

EJP SOIL topic ID <sup>†</sup>	Title	Number of projects	Maximum available funding per project
<b>Topics</b>			
CA2	Identifying adaptation options, related to agricultural soil management, to respond to water-related impacts of extreme weather and climate change	1	1.75M€
SE5	Mitigate and adapt to salinization and restore saline soils: understanding the processes and improving cropping systems under current and future climate	1	1.75M€
SE6	Soil futures: scenario modelling for assessing the potential of climate-smart sustainable soil management to provide multiple ecosystem services	1	1.75M€
AD3	Soil specific guidelines and decision support tools with focus on soil organic matter, water retention and nutrient use efficiency	1	1.75M€
POL3	Healthy and safe soils in the agro-ecological transitions towards a circular bioeconomy	1	1.75M€
CA4/SP3-1	Contribution of soils to climate change mitigation and adaptation, sustainable	1	1.75 M€



These projects have received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement No. 862695.

EJP SOIL topic ID <sup>†</sup>	Title	Number of projects	Maximum available funding per project
	agricultural production and environment in agroecological systems		
CA4/SP3-2	Fostering the adoption of agroecological systems for climate change mitigation and adaptation and sustainable agricultural production	1	1.75 M€

<sup>†</sup> EJP SOIL topic ID: CA Climate change adaptation; SE Sustainable Environment; SP Sustainable Production; AD Adoption of sustainable soil management; POL Science policy interface.

### 3 Budget, funding modalities, eligibility criteria and project types

The EJP SOIL is a 5-year program that runs from February 2020 (M1) to January 2025 (M60). The EJP SOIL falls into the concept of a co-fund action. **For the 3<sup>rd</sup> internal call of EJP SOIL projects a budget of maximum 13,5 M€ has been allocated.** General information relevant for consortium building (e.g. project size, number of consortium beneficiaries and linked third parties; geographical coverage) is given in Table 1 and in detail in Annex 2 for each topic.

After the closing date for submission, all proposals will be checked against the mandatory call's eligibility criteria:

- The application must be written in English.
- Applications must be complete and in accordance to the submission procedure.
- Applications must be submitted in time.
- Proposals including beneficiaries and/or third linked parties that are NOT EJP SOIL beneficiaries are not eligible to apply and will be rejected (see Annex 1).

EJP SOIL experts who are involved in the internal call preparation (i.e. Johanna Leppälä, Rosemarie Stangl, Anna Briefer, Elena Rodríguez-Valín, Violeta Carrasco, Marja Kujala) cannot participate in the preparation of proposals nor get involved in subsequent project implementation.

Depending on the topic and type of project, the proposal must meet the following specific call eligibility criteria:

- **Medium sized project:** minimum 5 consortium beneficiaries and/or linked third parties with geographical coverage requested in the topics of this call; inclusiveness is of high importance; duration in maximum 24 months; up to 1.75 M€.



## 4 Submission, eligibility check, evaluation and selection

On the 7<sup>th</sup> of April 2021 (M27) a webinar for interested applicants will be organised (more information at [www.ejpsoil.org](http://www.ejpsoil.org)), which will give an overview about all relevant aspects of the Call (i.e., topics, conditions, requirements, proposal submission, evaluation, etc.) and provide time to answer open questions. More detailed information will be released directly on the submission tool website ([Link](#)) in due time.

### 4.1 Submission

Please follow the instructions of the call text published at [www.ejpsoil.org](http://www.ejpsoil.org) to submit the proposal (font: Arial, font size: 12, line space: 1.5) prepared in accordance to detailed instructions given in Annexes 3 to 5:

- Annex 3: Proposal template: Project information; Consortium beneficiaries and linked third parties; Project summary budget; Description of the work; Communication strategy; Data management strategy; Work packages and work plan
- Annex 4: Budget plan;
- Annex 5: Ethics → Self-assessment;
- Annex 6: Certificate of co-funding → to be submitted after selection;
- Annex 7: Letter of confirmation → signed by the project coordinator and submitted after selection.

Annex 4 should be submitted in form of a XLS file while the main application (based on annexes 3 and 5) should be submitted in form of a PDF file (i.e.; in max. 5 MB) to the Call Office by the project coordinator on behalf of the project consortium via the EJPSOIL online proposal submission system ([Link](#)).

### 4.2 Expert evaluation of proposals

The evaluation of eligible proposals will be performed by a peer-review expert panel. This panel is composed of international experts with acknowledged scientific excellence and high expertise of the respective discipline. The members of the panel are proposed and selected by the Call Board considering the research areas covered by the submitted proposals. Appointed experts will need to strictly respect the Call Boards' standards and rules for impartiality and confidentiality.

Each proposal will be evaluated by at least three independent experts against the following criteria<sup>2</sup>:

#### Excellence

- Clarity, pertinence, and scientific quality of objectives, ambition in relation to the call scope and topic addressed and innovative progress beyond the state-of-the-art;
- Appropriate consideration of interdisciplinary approaches and, where relevant, use of stakeholder knowledge in research and innovation content;

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<sup>2</sup> Evaluation rules of the Horizon 2020 ([https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf))





- Soundness of the concept, and credibility of the proposed methodology;

## Impact

- The extent to which the outputs of the project would contribute to each of the outcomes and expected impacts mentioned in the topic-specific call text, see Annex 2;
- Quality of the proposed measures to exploit and disseminate the project results (including management of Intellectual Property Rights (IPR), to manage research data where relevant, and to communicate the project activities to different target audiences (see detailed instructions in section 7 under “Communication and dissemination”)
- Any substantial impacts not mentioned in the topic-specific call text (Annex 2) that would enhance innovation capacity, address issues related to sustainable and climate-smart soil management, or bring other important benefits for society;
- Contribution to establishing and strengthening a durable cooperation between the consortium beneficiaries and/or linked third parties;

## Implementation

- Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise;
- Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.
- Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables;
- Appropriateness of the management structures and procedures, including risk and innovation management;

The three criteria will be scored independently, using scores from 0-5 for each criterion<sup>3</sup>. A threshold of 3/5 will be applied for each criterion, i.e. proposals with a mean score < 3 in any main criterion and their sum ( $\Sigma$  of Excellence, Impact, Implementation)  $\leq 9.99$  will not be recommended for funding. The evaluation by the peer-review expert panel will result in a ranking list per topic. The experts will provide a written evaluation report on strengths and weaknesses of each proposal. The evaluation reports will be communicated to the applicants as part of the notification letter. It is emphasized that due to the nature of this Call, the evaluation of proposals will be assessed under the premises of creating added value for EJP SOIL. This means that special attention should be paid to the scope of the Call described in section 1.2.

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<sup>3</sup> **0: Failure:** The proposal fails to address the criterion in question, or cannot be judged because of missing or incomplete information; **1: Poor:** The proposal shows serious weaknesses in relation to the criterion in question; **2: Fair:** The proposal generally addresses the criterion, but there are significant weaknesses that need corrections; **3: Good:** The proposal addresses the criterion in question well but certain improvements are necessary; **4: Very good:** The proposal addresses the criterion very well, but small improvements are possible; **5: Excellent:** The proposal successfully addresses all aspects of the criterion in question.



In addition to the above-mentioned criteria, also the Ethical issues (see under section 7) will be checked by the experts using the information provided by the applicants. Additional ethical assessment on the national level can be performed by the funding bodies on optional basis.

### **4.3 Proposal selection**

The Board of Program Managers (BPM; section 8 “Definitions”) will validate the research proposals for funding based on the expert panel evaluation results (Section 4.2) and recommendation for funding provided by the coordinator of the EJP SOIL (i.e. Coordination (evaluation report) in consultation with the ExCom (based on ranked list).)

The criteria for selection are based on overall scores given by the evaluation results (see section 4.2 of this document). Selection does not include weighting of criteria.

In case of equal overall scoring (section 4.2) for proposals applying for the same topic the BPM will evaluate against “relevance” criteria (see below): Contribution to better alignment of European and national activities and policies. If a proposal fails at this stage the reasons will be explained in detail in the decision letter and report.

The “Relevance” criteria will be scored independently; using scores from 0-5 for each criterion (see section 4.2 of this document).

The outcome of the BPM validation procedure will be communicated by the Call Office to the research project coordinators, who are responsible for informing their project beneficiaries and/or linked third parties about the result.

In some instances, the BPM might formulate conditions for research project (mandatory) or recommendations (optional) based on expert evaluation and BPM discussion to improve certain aspects of the applications.

### **4.6. Formal commitment of the participating organisations**

As selected research projects are 44% EU funded, each participating organisation of each selected project must fill in the Annex 6 certificate of co-financing, in order to ensure that expected amounts to be co-funded will be made available in course of the implementation of the project. Hence, after formal validation for funding, all involved beneficiaries/linked third parties have to sign a Certificate of co-financing (see Annex 6). This certificate aims at ensuring that each participating institute accepts to engage the necessary co-financing in order to implement the project. All this information should be collected by the project coordinator and sent completely and in time to the Call Office (see also sections “Timeline”, “4.1 Submission” and “7. Obligations for funded proposals”).

## **5 Ethics assessment**

An Ethics assessment is required for submission of proposals addressing the following ethical issues: environment, health and safety, exclusive focus on civil applications,



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personal data and data protection, misuse of research results and other ethics issues. Work involving the use of animals or humans should be carried out under the appropriate authorization, taking into account the European Union and national ethical requirements. Any proposal which seems to contravene fundamental ethical principles, shall not be selected, and may be excluded from the evaluation and selection procedure. Judgement of the significance of ethical issues will be made by using the criteria published by the Commission in its guidelines for the Horizon 2020 Framework Programme.

The applicant is required to complete the ethics self-assessment (Annex 5) and provide a supporting documentation referred to in the ethics issues checklist. The **ethics self-assessment** (Annex 5) becomes part of proposal preparation and may thus give rise to binding obligations that may later on be checked through ethics checks, reviews or audits. This means the time invested in this self-assessment is not wasted. It will actually improve research results and:

- the proposed research will be in line with applicable international, EU and national law;
- the proposal will be processed more easily during the EJP SOIL proposal selection procedure;
- the results of the research can be published more easily in internationally refereed journals;
- applicants will contribute to the responsible conduct of research, thereby increasing its social acceptance.

Ethics also matter for scholarly publication. Major scientific journals in many areas will increasingly require ethics committee approval before publishing research articles.

First source should always be at the applicant's institution. We would ask each applicant to seek advice from colleagues with expertise in the ethics of research, such as:

- specialized ethics departments;
- relevant managers in the applicant's university/research organization;
- ethics advisers in the applicant's organization;
- data protection officers.

They will provide information appropriate to the proposed project's specific needs and legal environment. Consider involving/appointing an ethics adviser/Data Protection Officer. From the beginning of the project, an ethics adviser can assist with ethical issues and put in place the procedures to handle them appropriately.



Please consult Horizon 2020 Programme Guidance “How to complete your ethics self-assessment”<sup>4</sup>. In addition, applicants can consult on the EC Website the Guidance Note – Ethics and Food-Related Research on core issues of ethical concern in the field of food-related research including appendix that addresses broader concerns in the field of food ethics.

## 6 Confidentiality and Conflict of interest

The proposals will be handled confidentially by the Call Office and the mandated experts responsible for the peer-review evaluation of the proposals. Each expert will have to sign a Declaration of Conflict of Interest, Confidentiality Disclosure Agreement and Code of Conduct Agreement.

## 7 Obligations for project coordinators and funded projects

**Each research project needs to appoint a project coordinator.** The project coordinator has the following role and responsibilities (see section 7):

- Confirm co-funding commitment (see Annex 6) of all involved EJP SOIL beneficiaries and linked third parties to ensure the eligibility of the project,
- Lead the consortium throughout the application procedure and be responsible for the correct submission of the full proposal (i.e. single step approach; see also section 5),
- Be responsible for the overall project coordination and act as the central contact point for the consortium during the full lifespan of the project,
- Inform the Call Office about any event that might affect the implementation of the project,
- Ensure that all work is carried to a high standard and that it meets contractually bound deliverables and milestones presented in the full proposal and approved by the funding bodies,
- Be responsible for the sharing of information, data and results among EJP SOIL beneficiaries and linked third parties,
- Ensure timely and complete delivery of milestones, deliverables, and financial reports as described in the approved work program, as well as reporting and monitoring obligations to EJP SOIL Call Office (WP3) and EJP SOIL Coordination. The project coordinator will not be responsible for the financial management of project funding, which will be handled directly by the involved consortium beneficiaries and linked third parties.

### Terms of participation

The project coordinators of the research consortia are requested to acknowledge the overall coordinating role of EJP SOIL throughout the duration of the funded research projects until the delivery and acceptance of the final project report by signing a letter of commitment (Annex 7).

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<sup>4</sup> [https://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/ethics/h2020\\_hi\\_ethics-self-assess\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-self-assess_en.pdf)



## **Start date of projects**

A project can start after the BPM validates the proposal (i.e. Funding Decision) and letters of commitment have been signed by project coordinators. Once the EJP SOIL Funding Decisions comes into force and grant preparation is completed, eligible costs may be claimed according to the European and national procedures. Projects should start in November 2022 (M34).

A list of the funded projects will be published in October 2022 (M33; and submitted to the European Commission as a deliverable D3.8). Therefore, applicants should be aware that the following information from the proposals may be published by EJP SOIL:

- Project title and project acronym,
- Duration of the project,
- Total funding of the project,
- Name of the project coordinator (including contact information as email and telephone number),
- Country and organisation name of each beneficiary/linked third parties,
- The publishable summary of the project from the application.

Information on each funded research project, including data on each participant and overview on the results will be sent to the European Commission after the end of the project period.

With the submission of the proposal all consortium beneficiaries and/or linked third parties agree that the above-mentioned information can be published. All personal data offered for project applications, reviewers and expert assessments, mailing lists, tracking websites, registration for activities and events will be collected, stored and processed in accordance with the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679). A data protection officer (DPO) of each involved beneficiary will be consulted, if necessary, to ensure compliance GDPR rules in collaboration with WP1, which manages data protection at EJP SOIL level. All the applicants are also expected to follow data protection and data sharing provisions of the EJP SOIL Consortium Agreement and EJP SOIL POPD. For more information please consult the privacy policy on the submission website or the Call Office.

## **National/ regional contracts**

The project coordinators of internally funded EJP SOIL projects are responsible for informing consortium beneficiaries and/or linked third parties about the selection result, for the implementation of possible conditions and recommendations of expert panel and BPM and for synchronising the project start among the consortium beneficiaries and/or linked third parties. After the project has been selected, the project coordinators will be contacted by the EJP SOIL Call Office in order to start the grant negotiation and accomplish the remaining steps until the research project can start.



## Financial issues and changes to the work plan or consortium

For the whole duration of the research project contract, it is the responsibility of the project coordinator to inform the Call Office about any changes in her/his project, i.e. modifications within the work plan, project consortium or contract. The changes will need to be approved by the respective beneficiaries/linked third parties (i.e. legal signatory who have the authority to sign Annex 6).

## Project monitoring, meetings and reporting

Each funded research project is expected to organise project meetings on a regular basis. The costs for these meetings should be included in the project budget. To enhance dissemination of the project results, additionally or in parallel to the own project meetings, all coordinators of internally funded medium sized EJP SOIL projects should calculate costs for the attendance of three mandatory consortium meetings (kick-off-, mid-term- and final meeting) in their project plan.

In order to promote coherence, project coordinators will be required to submit annual work plans for their projects that will be included in the EJP SOIL annual program as well as summary progress reports, annual technical reports, and a final technical report to the EJP SOIL Call Office (WP3) and EJP SOIL Coordination (WP1) about the results of their transnational project as a whole (in addition to reporting required at national level). Detailed information on the reporting and monitoring procedures as well as templates will be provided to the coordinators of the proposals selected for funding in due course. Additional progress information and reports may need to be delivered short-term on request by the EJP SOIL Call Office.

## Communication and dissemination

Communication<sup>5</sup>, dissemination<sup>6</sup> and exploitation<sup>7</sup> of outputs is a key part of the work done in the EJP SOIL. At the level of EJP SOIL funded project responsibilities are shared between internally funded EJP SOIL research projects, and WPs of the EJP SOIL. The project applicants are asked to read and refer to EJP SOIL's definition of *Communication*, *Dissemination* and *Exploitation*, when including considered specifications and budget lines for project communication, dissemination and exploitation activities. **Thus, the communication and dissemination plan is considered in the evaluation procedure of projects**; see Annex 3. WP9 (Claus Bo Andreasen, clausbo.andreasen@dca.au.dk and Line Carlenius Berggreen, lcb@dca.au.dk) of the EJP SOIL supports communication and dissemination *via* a two-stage approach:

- **Stage 1** (during proposal preparation): Describe in the proposal the relevance of the proposed research for specific stakeholders, and how the project will

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<sup>5</sup> Communication is the act of keeping an ongoing dialogue and information flow with and towards our external stakeholders. Keeping them engaged, updated and in the loop of what is going on in the EJP SOIL programme.

<sup>6</sup> Dissemination is spreading the news. It is the circulation of news and outcomes. Spreading and diffusing information about progress, outcomes and results from the EJP SOIL programme, reaching far into all relevant stakeholder networks. Making stakeholders EJP SOIL ambassadors.

<sup>7</sup> Exploitation is, based on the above, fostering actual application, utilization, and employment of EJP SOIL outcomes.



engage and interact with these on both national and European level (Annex 3). An EJP SOIL communication and dissemination kit is accessible at [www.ejpsoil.com](http://www.ejpsoil.com) (see for more details below => Stage 2).

- **Stage 2** (during project implementation): WP9 (Claus Bo Andreasen, [clausbo.andreasen@dca.au.dk](mailto:clausbo.andreasen@dca.au.dk) and Line Carlenius Berggreen, [lcb@dca.au.dk](mailto:lcb@dca.au.dk)) will support the funded EJP SOIL projects **with tools and structures** for communication and dissemination of activities and relevant results; including:
  - Project subpages at [www.ejpsoil.org](http://www.ejpsoil.org), making it possible to publish project results etc.;
  - An EJP SOIL newsletter providing stakeholders with information on research results, events etc.;
  - A communication and dissemination kit providing logos, templates etc.;
  - Access to a network of National Communication Representatives (NCRs)<sup>8</sup> committed to support interaction with national stakeholders;
  - A quick guide assisting project members in successful communication;
  - EJP SOIL workshops to be held in all participating countries engaging national key stakeholders;
  - Annual science days allowing EJP SOIL consortium beneficiaries and/or linked third parties to meet and present their work;

The consortium beneficiaries and/or linked third parties have to acknowledge the transnational funding of the EJP SOIL co-funds and the individual national institutes/organizations in any document that is published (in written, oral or electronic form) within the research project.

The EJP SOIL supports the European Commission's requirement to make research results from public-funds accessible and thereby strengthening the knowledge base for science and the society alike. For more information please refer to the rules in H2020 projects and the EJP SOIL's Consortium Agreement. Publications need to be published in Gold or Green Open Access and both publications and research data need to be deposited in Open Access repositories.

### **Intellectual property rights, use and access to results**

Results and new Intellectual Property Rights (IPR) arising from projects funded through the EJP SOIL Internal Call will be owned by the consortium beneficiaries and/or linked third parties according to the conditions stated in the EJP SOIL Grant Agreement and Consortium Agreement and shall not be in conflict with the respective national regulations. Applicants should consult the respective national institutes/organizations, if any questions arise. Researchers are encouraged to actively exploit the results of the project and make them available for use, whether for commercial gain or not, for public benefit to be obtained from the knowledge created.

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<sup>8</sup> The Project Communication Representatives (PCRs) is responsible for all project related communication and dissemination activities. Funded projects must specify how they will draw upon relevant professional assistance from WP9 and NCRs together with institutional communication departments to secure stakeholder and end user engagement at national level.



## **8 Definitions**

Board of Program Managers (BPM): Decision making body of the EJP SOIL consisting of the Program Managers representatives.

Call Office: responsible for administrative support regarding the Call, Call documents and procedures, submission tool and webinar. WP3 of the EJP SOIL consortium.

Beneficiary/linked third parties: Legal entity eligible to apply for and receive internal EJP SOIL funding. Beneficiaries of the EJPSOIL and their linked third parties listed in the Grant Agreement under Art 14.

EJP SOIL Coordination: manages the EJP SOIL consortium at the strategic, operational and organizational level. WP1 of the EJP SOIL consortium.














## Annex 1. EJP SOIL beneficiaries and their linked third parties

Member states	EJP SOIL beneficiaries and their linked third parties	Contact (Name and e-mail)
	Institut National de Recherche pour l'Agriculture, l'Alimentation et l'Environnement - INRAE Linked third parties: AgroParisTech, Institut Agro	Pierre Benoit <a href="mailto:pierre.benoit@inrae.fr">pierre.benoit@inrae.fr</a>
	Stichting Wageningen Research – WR	Saskia Visser <a href="mailto:saskia.visser@wur.nl">saskia.visser@wur.nl</a>
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## Annex 2. EJP SOIL call topics

### CA2 - Identifying adaptation options, related to agricultural soil management, to respond to water-related impacts of extreme weather and climate change

**Rationale:** Soil properties are linked to multiple water functions at field and landscape level, affecting the availability and quality of water resources. In European agriculture, soil physical properties and soil management through mechanical, chemical or biological interventions underpin the sustainable production capacity under climate change. Several issues threaten this capacity of soils for regulating water functions and productive crops: (i) the occurrence and intensity of extreme weather events which affect soil structure, and consequently surface runoff and erosion processes; (ii) soil management regimes which induce soil compaction and degradation of soil structure and can simultaneously affect soil physical properties and the associated water functions.

Soil physical properties, such as bulk density, water retention parameters and aggregate stability are under-documented in soil monitoring systems<sup>9</sup>. To adapt agricultural production systems to future extreme events and climate change<sup>10</sup>, soil management practices need to evolve and consider both an excess dry-spells and droughts, as well as excess saturation and flood conditions, and finally aim towards higher resilience of soils to these hydro-climatic variations. A range of soil and crop management interventions can improve soil physical properties, structure and associated water functions of soils. These interventions range from soil tillage practises (timing, type of tillage) and other physical soil management options (drainage systems, soil conservation structures) to the use of chemical (e.g. liming) or biological amendments (e.g. green manures) and management options (e.g. sequencing deep root crops)<sup>11</sup>.

There is a need to identify synergies in multiple management interventions to enhance soil water functions, crop production potential and cost efficiencies under more extreme weather and climate change. Another challenge is to provide insights in the potential climate change induced shifts in resilience and competitiveness of current farming systems across Europe and in the financial resilience and relative competitiveness of the considered/proposed farming systems.

**Scope:** Projects should focus on agricultural soil management-related adaptation options, with emphasis on soil physical properties that support water functions and improve soil resilience to hydro-climatic variations and trends. A synthesis is expected

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<sup>9</sup> Orgiazzi et al 2016 LUCAS Soil, the largest expandable soil dataset for Europe: a review European Journal of Soil Science, January 2018, 69, 140–153 doi: 10.1111/ejss.12499

<sup>10</sup> <https://easac.eu/publications/details/extreme-weather-events-in-europe/>, FAO. 2020. The State of Food and Agriculture 2020. Overcoming water challenges in agriculture. Rome. <https://doi.org/10.4060/cb1447en>

<sup>11</sup> Eden et al , 2017 Organic waste recycling in agriculture and related effects on soil water retention and plant available water: a review Agron. Sustain. Dev.37: 11 DOI 10.1007/s13593-017-0419-9



to evaluate soil – crop management strategies in their capacity to adapt to extreme weather and to climate change-related water scarcity or excess. The focus is on soil physical properties to: 1) manage infiltration and drainage (and thereby indirectly soil surface conditions) and 2) enhance/maintain water holding capacity in the root zone, with physical and-or chemical or crop (crop rotation /root developments) management options. A framework should be developed to evaluate synergies and potential trade-offs of 'best bet' soil-crop management strategies for adapting to water-related impacts of extreme weather and climate change. Proposals should associate biophysical and economic expertise to understand incremental and synergies in soil management strategies. Particularly, they should estimate cost efficiencies and return on investments for short /medium /long term interventions for soil–crop management strategies. The considered strategies could concern one or several of the following items:

- New ways to use organic or chemical amendments to ameliorate soil physical and chemical stresses to crop root systems, limiting rooting depth and crop productivity, and/or to use new cropping systems better adapted to soil constraints;
- Soil and crop management options to increase root zone water availability through management of soil structure;
- Estimating available days for agricultural management, regarding climate projections and agricultural scenarios, over Europe;
- Estimating evapotranspiration and soil water recharge for climate projections and agricultural scenarios and agricultural soil management options over Europe, taking into account soil physical properties;
- Developing/piloting/testing precision agriculture practices and innovations in soil moisture measurements with sensors-model-RS packages, to maximize soil moisture use and water and nutrient efficiency, pending on incidence and prognosis of extreme weather events.

#### **Expected outcomes:**

- Shared improved understanding on the capacity of soil – crop management strategies to adapt to extreme weather and to climate change-related water scarcity or excess;
- Suggestions on best bets /resilience / 'no regret' interventions based on maximized synergies and potential trade-offs and context-specific advices for soil – crop management strategies.

#### **Expected impacts:**

- EJP SOIL EI1: Fostering understanding of soil management and its influence on climate mitigation and adaptation, sustainable agricultural production and environment;
- EJP SOIL EI5: Fostering the uptake of soil management practices which are conducive to climate change adaptation and mitigation.

**Project Type:** Medium size research project (up to 1.75 M€).



## **Promoting the contribution of soils to climate mitigation and adaptation, sustainable agricultural production, and a sustainable environment**

The agroecological transition can be considered as a highly potential opportunity to respond to changes and challenges posed by climate change across the European continent. Agroecology is a holistic approach that relies on and maximizes the use of ecological processes to support agricultural production. Agroecological systems are characterized by higher biodiversity at all levels (intra- and interspecies, cropping and farming systems, landscapes and non-agricultural elements) than traditional highly intense agricultural systems. Such agroecological systems are potentially better adapted to local environmental conditions and to social and economic requirements. Transition of intensive agricultural systems to agroecological systems leads to more sustainable and climate responsive agricultural production. Such a transition is a relevant contribution to the implementation and success of the EU Green Deal and EU policies on biodiversity, on circular economy and on climate change. A transition towards agroecological systems fits the recommendations from the EU Mission A Soil Deal for Europe and the Farm to Fork Strategy and will contribute to reach the target “25% of agricultural land under organic farming”.

Challenging agroecological systems for such purposes needs to progress in two directions. First, getting and gathering new knowledge on the contribution of soils to the overall systems, hence focusing on biophysical aspects, is required to promote the transition of cropping systems towards a more resilient, sober, sustainable and healthy food production. Second, the adoption of sustainable production systems should be encouraged through a combination of strategies where national and local goals are aligned. This requires tailored public policies at the EU and Member State level, connecting to local conditions and acknowledging farmers' needs. Understanding factors that motivate farmers to adopt more sustainable practices is vital for a robust agricultural system transition. Two topics have therefore been proposed.

### **CA4/SP3-1 – Contribution of soils to climate mitigation and adaptation, sustainable agricultural production and environment in agroecological systems**

**Rationale:** Introducing higher biodiversity in agroecosystems can benefit soil health and improve different soil functions. Examples and experiences include better soil exploration by deep rooting in mixed crops or deep rooting crops to enhance water and nutrient availability. The facilitation of symbiosis of roots with microbes may also enhance nutrient uptake. More soil carbon will stimulate soil biodiversity and enhance resilience to climate change and climate variability and the ability of soils to sustain more frequent extreme events (prolonged drought, extreme wet conditions, extended warm periods, and higher risk for diseases to occur). However, the impact of the transition to agroecology on the resilience of agroecosystems to climate change in many European regions is poorly understood and documented, especially for its soil components. Understanding and quantifying this impact is particularly relevant when the climate is changing and forces local and regional agricultural systems to adapt.



To date, most long-term experimental studies and meta-analyses on the effects of management on agricultural soils have focused on the impact of a single practice or a specific technology. As a consequence, they have not considered the full context of an agroecological farming system, nor considered the broad range and diversity of agricultural systems that exist in Europe. Future projects under HORIZON-CL6-2021-CLIMATE-01 will consider a wide range of crop and farming agroecological systems, but will not focus on soils.

**Scope:** The project should evaluate the contribution of soils to ecosystem services related to climate mitigation and adaptation, sustainable agricultural production and sustainable environment, in agroecological farming systems. This will include the provisioning services, the ability of the soils to contribute to climate change mitigation (conserve or increase SOC stocks, decrease N<sub>2</sub>O emissions), and the ability of soils to contribute to climate change adaptation (e.g., soil water infiltration & storage and yield stability).

The agroecological systems and the underlying climate-smart sustainable soil management practices considered should be selected on their a priori positive effects on climate change adaptation and mitigation (e.g., agroforestry, conservation agriculture, organic farming, integrated crop-livestock-forestry systems). The project should select some representative situations accounting for the actual adoption or potential for adoption of agroecological systems by farmers in climate regions and agricultural zones across the EU and related to the projected climate change, as well as accounting for the Green Deal objectives. This will require the sourcing and use of results of completed projects and existing data in the EJP SOIL related to innovative farming systems.

The research will use available tools (existing models and indicators). The project should identify, use, and adapt if needed, a series of long term and highly instrumented case studies in different pedo-climatic conditions. This could be based upon long term experiments (LTE's) of the EJP SOIL consortium allowing for retrospective analysis of soil conditions, crop yields and climate conditions and change. In complement, the project could also identify pioneer farmers in different EU countries as lighthouse farms to enhance the regional applicability and allow farmers to recognize their local conditions and systems. The research could also be performed by modelling the complex soil – plant interactions in agroecological systems, to evaluate them regarding their resistance and resilience under different climate scenarios (RCPs). These different research approaches could be combined. Project outputs should feed into the future EU Partnership on agroecology.

#### **Expected outcomes:**

- Knowledge is available and shared on the effect of climate variability across EU pedoclimatic zones on soils and crop in various agroecological systems;
- The impact and contribution of soils and soil management across the range of agroecological systems to climate mitigation and adaptation and relate to future regional climate conditions is evaluated and can support targeted advice.



**Expected impacts:**

- EJP SOIL EI1: Fostering understanding of soil management and its influence on climate mitigation and adaptation, sustainable agricultural production and environment.

**Project Type:** Medium size research project (up to 1.75 M€).



## **CA4/SP3-2 – Fostering the adoption of agroecological systems for climate mitigation and adaptation and sustainable agricultural production**

### **Rationale:**

The adoption of agroecological approaches is currently relatively limited to pioneering farmers and farmer associations. One explanation is that, contrary to practices, which are currently being stimulated through the CAP, adoption of sustainable agroecological systems is until now, not promoted by specific policies at the EU level. Furthermore, the measures promoted are often ineffective due to overly complex patterns of targeting measures and instruments, making it difficult for national policies to match local priorities. Improving farmers's uptake of agroecological practices calls for specific support measures and for the design of specific business cases at the farm and landscape level.

Understanding factors that motivate farmers to adopt more sustainable practices is vital for a robust agricultural system transition and for the implementation of agroecological systems. There is a need to move beyond the biophysical and socio-economic context, and also look at the aspirations and ambitions of the farmer with a focus on soil.

**Scope:** This project will utilize and build upon the knowledge and data provided by ongoing and completed FP7/H2020 projects looking at the adoption of sustainable measures, farmer's behaviour and risk perception. Focusing on soils, it will be complementary to future projects under HORIZON-CL6-2021-CLIMATE-01 will consider a wide range of crop and farming agroecological systems.

Farmer's behaviour and risk perception are at the core of this assignment. Farmers do not work in isolation, but are linked in the food system to various institutions and actors. The project should include a stakeholder analysis (powers) and their roles and responsibilities in relation to the adoption of measures and system transition. The project should consider the farmers and their relation with the other actors: policymakers, value chain actors, farmer associations and cooperatives, research and financial institutions as part of the context and adoption process.

Farmers differ in their perception of risk and opportunities related to soil management, even when operating in similar contexts. Triggering behavioural change and reaching out to farmers must account for these perceptions. This should also enable to identify incentives that resonate with farmer groups or types.

The insights should be used to improve extension services which are tailored to farmers, to understand how inter- and intra-farm cooperation and experimentation works for different farmer types and help foster efficient one; to design communication strategies adapted to the type of farmer, region and value chain. Project outputs should feed into the future EU Partnership on agroecology.

### **Expected outcomes:**



These projects have received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement No. 862695.



- Quantitative and qualitative data and information on the drivers and barriers for the adoption of soil management practices that enable climate-smart sustainable soil management.

**Expected impacts:**

- EJP SOIL EI5: Fostering adoption of sustainable and agroecological farming systems conducive to climate change adaptation and mitigation.

**Project Type:** Medium size research project (up to 1.75 M€).



## **SE5 – Mitigate and adapt to salinization and restore saline soils: understanding the processes and improving cropping systems under current and future climate**

**Rationale:** Soil salinization is recognised as one of the major threats to soils. It makes it more difficult for plants to extract water, promotes toxic concentrations of Cl<sup>-</sup> and to a lesser extent Na<sup>+</sup>, and participates in the deterioration of the soil structure. Irreversible soil alteration may exceptionally result from clay dispersion caused by the irrigation of salty soils with clean water in southern European countries and the Mediterranean basin, while salinization could lead to soil alkalinization-sodification in other parts of the World (e.g. sub-Saharan Africa and the Horn of East Africa). In Southern Europe, the tropicalization of the climate is already observed with drought periods which should extend, followed by unpredictable heavy rains. In addition, competition between different water uses leads to an increased pressure on water. Irrigation is increasingly necessary to meet crop water needs. Irrigation can use underground water and/or reclaimed wastewater that may be rich in salts and/or other pollutants. The risk of irrigation with salt water is more important as the quantities of water used do not allow leaching of salts towards deeper soil horizons and promote their gradual concentration in soil. Moreover, salt extraction by plants is not relevant from a quantitative point of view. There is a need to optimize water management for sustainable cropping practices with regard to salinization risks. The optimization should consider the regional context to encompass also aspects of water use in irrigated systems (harvesting, storing, treating wastewaters with the possibility of desalinating part of it for example by reverse osmosis). Participatory approaches involving water managers and farmers would improve the outcomes of research in these aspects.

**Scope:** Soil salinization and the positive or negative impacts of different irrigation scenarios as well as water desalination (sea water, brackish water, and wastewater) have been extensively studied and are already available at low cost. Proposals should focus on one of the following three objectives:

- Development of a decision support system for water management at regional and local scales, including irrigation management, in order to ensure sustainable water management avoiding any accumulation of salts in the soil horizons explored by the roots;
- Development of sustainable solutions to improve soil structure of salt enriched soils. Solutions could include organic fertilization, bio-amendments, or the use of some plants well known to positively affect soil structure ;
- Analysis of the processes underlying the tolerance of certain plants to soil salinity, including 'plant-endorhiza' interactions, which would allow better use of salty soils.

For the first item, participatory approaches (e.g. through living labs as recommended the EU Mission A Soil Deal for Europe) is desirable whenever possible.

### **Expected outcomes:**

- Depending on the chosen objective, outcomes concerning the sustainable soil management strategies of salt-affected soils could be:



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- Designing and advising optimized irrigation practices (objective 1);
- Recommendations on the proper use of organic fertilizers taken up for farmers advice and assessing bio-amendment strategies are developed by soil stakeholders (objective 2);
- Propositions of strategies for reclamation and restoration developed by soil stakeholders (objective 3);
- Improved understanding and modelling of salinization process in present and future risk areas in the climate change scenario (collaboration with WP6 of EJP-SOIL).

**Expected Impacts:**

- EJP SOIL EI1: Fostering understanding of soil management and its influence on climate mitigation and adaptation, sustainable agricultural production and environment;
- EJP SOIL EI5: Fostering the uptake of soil management practices which are conducive to climate change adaptation and mitigation.

**Project Type:** Medium size research project (up to 1.75 M€).



## **SE6 – Soil futures: scenario modelling for assessing the potential of climate-smart sustainable soil management to provide multiple ecosystem services.**

**Rationale:** Biophysical models have been and are being developed to predict the ecosystem services provided by soils, including soil organic carbon sequestration and GHG mitigation. These models can be coupled with models of economic agricultural production decision, market supply and demand, and policy impact evaluation to carry qualitative or quantitative foresight approaches. Developing such analyses for several soil functions and ecosystem services will provide new insights and knowledge to support effective soil policy and selection of more cross-cutting measures to be included in eco-schemes and incentive-based policies. Moreover, market-based strategies for service valuation are increasingly considered and even implemented by private operators, based on similar insights and knowledge.

Biophysical and to a lesser extent, economic models are most often used in current climate conditions, under predefined land-use and agricultural practices, while the current climate, socio-economic conditions, trends in consumption and policies are changing.

Scenario modelling is a powerful approach in this respect, as scenarios are used to describe plausible futures for drivers of change and options for altering these drivers through management strategies and policy interventions. Models then enable these scenarios to be translated into consequences on the modelled functions and services of ecosystems and of soils (IPBES, 2016). So far, policy scenario modelling has been only applied in limited occasions to agricultural soils (e.g., SoilCare H2020 project), requiring a significant effort in building both scenario and modelling frameworks.

**Scope:** Projects should develop new scenarios integrating socio-economic scenarios (e.g., Shared SocioEconomic Pathways, O'Neill et al., 2014<sup>12</sup>), climate scenarios (e.g., Representative Concentration Pathways RCPs, van Vuuren et al. 2014<sup>13</sup>) and EU policy changes (e.g., a scenario for development of organic agriculture, to comply with the Farm to Fork Strategy, or the development of biodiversity-favourable landscape features as promoted in the Biodiversity Strategy). The potential of these new scenarios to differentiate among various levels of achievement of the European Green Deal and the Mission “A Soil Deal for Europe” objectives (e.g., reduce land degradation and pollution, prevent erosion, improve soil structure, reduce the EU global footprint on soils) is essential. Projects should establish contact with MACSUR/SciPol working group to foster complementarities and synergies.

In parallel, projects should design a modelling framework built around a coupling (interlinking) architecture of biophysical soil models and integrated models of agriculture, climate, soil and the economy. Integrated interdisciplinary models allow

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<sup>12</sup> O'Neill, B.C., Kriegler, E., Riahi, K., Ebi, K.L., Hallegatte, S., Carter, T.R., Mathur, R., van Vuuren, D.P., 2014. A new scenario framework for climate change research: the concept of shared socioeconomic pathways. *Clim. Change* 122, 387e400.

<sup>13</sup> Van Vuuren, D.P., Kriegler, E., O'Neill, B.C., Ebi, K.L., Riahi, K., Carter, T.R., Edmonds, J., Hallegatte, S., Kram, T., Mathur, R., 2014. A new scenario framework for climate change research: scenario matrix architecture. *Clim. Change* 122, 373e386.



coupling existing models to address the synergies, antagonisms and cost/benefit ratios among different soil management strategies relevant for the EJP SOIL challenges. In particular, economic models of agricultural markets and supply, and land use changes at a higher scale than farm-level, can be used to test for such scenarios, if available from previous EJP SOIL projects or from their partners. A possibility is to build the scenario-based modelling framework along two dimensions: changes in agriculture practices and systems on the one hand, identification of changes in soil health and services provided on the other. The modelling framework should be defined and documented with detailed argumentation, then set up and if possible, be preliminarily used depending on available models and limited duration of the project.

To build such framework, models utilised or developed by other EJP SOIL projects (1<sup>st</sup> internal call) should be given high priority, to predict the provision of ecosystem services by agricultural soils, including agricultural production and climate change mitigation, under climate-smart sustainable soil management options. This priority extends to data already collected and managed by EJP SOIL projects. Examples of models and data include EJP SOIL projects: Carboseq (feasible Soil Organic Carbon sequestration potential data), SOMMIT (simulation outputs of long-term agro-ecological system responses to contrasting management options), TRACE-Soil (soil abiotic and biotic predictors of trade-off magnitudes involving carbon sequestration, biodiversity, GHG emissions), STEROPES (satellite information to predict cropland soil organic carbon content), SCALES (harmonisation of data and modelling approaches for the management of sediment connectivity) and SIREN (inventory of indicator systems).

Alternative methods can also be considered for implementing scenarios at national scale (method of transfer, use of scientific external references) in case of lack of specific data for some countries from EJP SOIL projects. The modelling framework, associated with the scenario design, should clearly target the assessment of the performance of soil management strategies in addressing the quantitative targets proposed by the Mission Board on Healthy Soil and Food (e.g., current C losses in farmlands should be reversed to an increase by 0.1-0.4% per year). Intrinsic framework properties can also be checked for consistency with the Green Deal objectives, when considering the impact of changes in agricultural practices and systems on soil functions and services.

### **Expected outcomes:**

- Supporting effective policy and selection of eco-schemes in different European countries with a better vision of how soils and their services may respond to different pathways of future human development in Europe.
- Identifying potential impediments and bottlenecks that need to be addressed and overcome to ensure the provision of ecosystem services by agricultural soils.
- Increased consistency in EJP SOIL projects' outcomes, by complementing the outputs of 1st and 2nd internal call projects and integrating and linking them within scenario modelling frameworks.
- Increasing the number and range of modelling frameworks involving interdisciplinary approaches, related to climate smart and sustainable soil management for the provision of multiple ecosystem services.



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**Expected impacts:**

- EJP SOIL EI1: Fostering understanding of soil management and its influence on climate mitigation and adaptation, sustainable agricultural production and environment.
- EJP SOIL EI2: Understanding how soil carbon sequestration can contribute to climate change mitigation at regional level including accounting for carbon.
- EJP SOIL EI5: Fostering the uptake of soil management practices which are conducive to climate change adaptation and mitigation.

**Project Type:** Medium size research project (up to 1.75 M€).



## **AD3 – Soil specific guidelines and decision support tools with focus on soil organic matter, water retention and nutrient use efficiency**

**Rationale:** The level of implementation of sustainable soil management practices in Europe varies substantially among farmers and regions. The current status of the most promising management practices was analysed in relation to their level of uptake in research, policy, and farmers' practice (EJP SOIL Roadmap and report Task 2.4.1<sup>14</sup>). Whether farmers adopt a sustainable management practice, both in environmental, social and financial terms, depends on many factors (Zhang et al., 2018). An important barrier is the uncertainty of the impact from implementing potential practices on soil quality and farm profits (Hvarregaard Thorsøe, 2019; Cerda et al., 2017). The farm level decision-making process is further complicated by trade-offs, for example, between environmental and economic benefits, short- and long-term benefits, and between different soil quality aspects. Barriers are largely dependent on the type of management practices in play and whether practices fit specific and regional farm strategies.

Climate change will (gradually) modify the environmental conditions for farming practices and farm strategies. As such, the agricultural advisory services across Europe are well equipped with flexible, good quality and (scientific) evidence-based assessment and decision support tools to analyse and select options to adopt strategies and cropping and farming systems to sustain soil quality and optimize farm profits and to support farmers in well-timed decisions on adaptation to e.g. climate change and other soil challenges. Across Europe, examples of decision support tools concepts, protocols and (mobile) applications have been developed by H2020 projects, e.g. Landmark, SoilCare, Prisma and iSqaper and also by many national initiatives. In general, the quality of decision support tools would benefit from sharing knowledge, approaches and concepts across regional actions across Europe, rather than from developing and providing a single best solution. At this point, a full stocktake on what tools are available combined with a systematic assessment of the underlying principles and approaches (SWOT analysis) is missing. Such a study will likely reveal what works and what may need to be improved.

In agriculture across Europe, most decision support tools that farmers and advisory services use, are equipped to assess the use of nutrients (fertilisers and organic manures) and focus mainly on crop productivity related to nutrient supply. A better alignment of these recommendations with current and future policy targets relative to climate change mitigation and adaptation, biodiversity, water quality, would allow farmers to be more susceptible and responsive in considering concrete modifications to their farm management strategies. This requires that realistic and comprehensive understanding on the importance of soil -related functions is incorporated in such decision support tools.

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<sup>14</sup> Synthesis of impacts of sustainable soil management practices, Report Task 2.4.1; Roadmap for the European Joint Programme SOIL, Report Task 2.4



Decision support tools may have crucial roles in the lifelong training and education of both (young) farmers and advisory services across EU. These would ultimately improve performance and quality of farming and reduce the environmental impact of food production and land needed for agricultural production. Also, such decision support tools would contribute to a more fair playing field and to bringing opportunities in farmer communities across Europe.

Farmers and advisory services could gain access to practical science-based tools to analyse farming strategies and options to enhance farm performance and identify changes in their day-to-day work and decisions to facilitate water storage, nutrient use efficiencies and soil organic matter management. The application of decision support tools provides an outlook into the expected future farm performance including KPI's at farm level. Enhancing farmers' realistic and comprehensive understanding of the importance of soil in adaptation to climate change, nutrient use and greenhouse gases mitigation.

**Scope:** The project should design the specifications for a web-portal that would allow advisory services and farmers to access existing decision-support tools allowing to monitor adaptation to climate change, climate change mitigation. The tool specifications should also consider soil quality, degree of circularity of cropping systems, economic versus environmental performance indicators and more if appropriate. The project will exchange with the future Horizon EU MISS-01-01 project which will design one-stop shop soil portals and with EUSO which will host an EU-scale soil web portal.

The use of (region) specific tools to provide for either qualitative or quantitative information from available tools should be promoted. This would require to be able to define regionally these target objectives (vs guidelines). A mock-up of a soil quality monitoring dashboard could be drafted with the main aim to follow how close/far target results on soil indicators (SOM, water retention, nutrient status/efficiency, GHG emissions and CO<sub>2</sub> removal) are from benchmarks or what trends are resulting from changes to farm management at different scales from farm to country. The mock-up should outline what an attractive and user-friendly dashboard could look like if being developed in a future initiative (e.g., promoted by the Mission "A Soil Deal for Europe"). It should account for previous works (e.g., Landmark has an example of a dashboard available) and for ongoing EJP SOIL projects SIREN, SERENA and MINOTAUR). This also requires – where possible – the dashboard to use unified principles at the EU level and to be available under national configuration. This system would benefit if a set of activities were developed based on a Tiered approach (consider tier 1 on qualitative information, tier 2 on look-up tables and tier 3 calculation models).

The project should:

- investigate – and build if possible on available stocktakes and surveys such as the CIRCASA survey - farmers expectations and needs across Europe regarding decision support tools and farmers' willingness and capability (in terms of being able to supply required data to run the decision support tools) to use them either alone or supported by advisory services;





- perform a systematic stocktake of decision support tools across Europe. Specific attention should be on regional differences and usability across regions and include new initiatives in the process of being launched;
  - analyse principles for assessment in different decision support tools and assess their usability across pedoclimatic zones;
  - draw from these analyses recommendations, in the form of guidelines and guidance to improve the quality and enhance the use of decision support tools across all MS in EU and climate regions and agricultural systems. The guidelines and guidance could benefit from connecting and testing at initiatives promoted and recommended by the EU Mission A Soil Deal for Europe e.g. lighthouse farms across Europe.

**Expected outcomes:**

- A better use of existing soil-related decision support tools available for agricultural soils in Europe;
- A better understanding of their underlying principles and approaches and their scientific underpinning and on the farmers appreciation and expectations of such tools;
- An improvement of existing or elaboration of new decision support tools to fill the identified gaps;
- A mock up issued from the project is used by stakeholders of the farming sector to co-construct a dashboard to identify and evaluate modifications to farm management in response to policy targets on climate, soil quality and environmental issues in addition to traditional agronomic assessments;

**Expected impacts:**

- EJP SOIL EI5: Fostering the uptake of soil management practices which are conducive to climate change adaptation and mitigation

**Project Type:** Medium size research project (up to 1.75 M€).



## **POL3 – Healthy and safe soils in the agro-ecological transitions towards a circular bioeconomy**

**Rationale:** A circular bioeconomy optimizes the usage of all agricultural areas and residual streams from agriculture to food-based industries, which can reduce the wastes and usage of landfill areas. Soils play a crucial role in the realization of the European circular bioeconomy, as soils are the supplier of sustainably produced biomass and food and the solid foundation under Europe's biodiversity. Apart from providing biomass, soils are increasingly recruited in a range of policies with promises of ecological, climatic and agricultural transitions, without sufficiently taking into account the trade-offs between these soil services. Furthermore, when recycling biomass, it is a prerequisite that waste fluxes preserve agricultural lands safety. Hence, assuring healthy and safe soils supporting a circular bioeconomy requires social-science investigation and scrutiny by considering trade-offs among soil functions, avoiding the accumulation of safety risk.

**Scope:** Research should examine the contemporary reinvestments in soils in a context of social and ecological transitions. It should produce critical knowledge that supports shifts towards knowing and managing soil resources more holistically in innovative agri-food and biomass chains, thereby supporting the agro-ecological transition towards a circular bioeconomy. New, safe land managing systems aiming for biodiverse, healthy soils and landscapes are needed, and will be key to sustain a transition towards the circular bioeconomy.

Initiatives aiming at biodiverse, healthy soils and landscapes are currently being developed in territories (farmer communities, regions) and in agro-food and biomass chains (labels). These initiatives should be analysed for the way soils are, or could be taken into account for their impact on biodiversity restoration, and agro-ecological production of food and biomass for the circular bioeconomy. Challenges, specifically addressing safety issues that withhold accomplishing these initiatives should be identified and appropriate context-specific solutions should be designed, in relation with public policies.

Research should integrate knowledge developed in H2020 projects like RELACS, SOILCARE, PANACEA, CELEBIO, LANDMARK and MINDSTEP, and projects out of EJP SOIL topics CM8, ES1/ES2, FS2/MT4, POL2/ES7 and analyse several existing initiatives. The final objective should be to design EU region-specific systems integrating healthy and safe soils and landscapes for the agro-ecological transition towards a circular bioeconomy. To achieve this goal, the project should:

- Synthesise past and current (EJP SOIL) circular bioeconomy projects and initiatives dealing with the safety, agronomic and environmental impacts in relation to the potential policy opportunities and challenges; give attention to the question on how resource management can be optimized by safely closing nutrient, energy and biomass cycles;
- Develop a typology describing properties of sustainable agroecosystems at different scales (from farm to small regions) and in different pedo-climatic zones;



- Design long-term safe, sustainable and economically viable and socially acceptable circular agro-ecological production systems (farm scale) that fit in multipurpose land management systems (based at the landscape scale) and that address EU strategies and ambitions in relation to biodiversity, food production, climate and circular economy;
- Discuss existing and, when needed, design new policy instruments that foster and accompany the development of production and land management systems;
- Develop an evaluation protocol for the production systems and designed relevant policies.

**Expected outcomes:**

- An integration of soils as major components of agroecosystems in EU in the Biodiversity strategy 2030, the Farm to Fork strategy and the EU Circular Economy Action Plan
- A better knowledge on the farming systems contributing to the transition towards a safe, sustainable and economically viable and socially acceptable circular agro-ecological production;
- A better consideration of soils in future public policies to support the agro-ecological transition towards circular bioeconomy.

**Expected impacts:**

- EJP SOIL EI5: Fostering the uptake of soil management practices which are conducive to climate change adaptation and mitigation
- EJP SOIL EI1: Fostering understanding of soil management and its influence on climate mitigation and adaptation, sustainable agricultural production and environment

**Project Type:** Medium size research project (up to 1.75 M€).



### **Annex 3. Proposal template**

**Acronym**

**Title**

Coordinator: XXX

Proposal for EJP SOIL 3<sup>rd</sup> Internal Call topic: XXX

[Date of submission]

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## **1. Project information**

Title and acronym:

Keywords:

Duration in months:

Topic:

Project leader: *Organization name and affiliation*

Publishable summary: *in max 800 characters incl. spaces*

## **2. Information of participating beneficiaries and linked third parties**

*Filled by each beneficiary, third linked part and the project coordinator.*

### **2.1. Beneficiary and/or Linked Third Party no. 1**

Organization:

Responsible person at the organization:

Role of beneficiary/linked third parties in the project

*Max. 1000 characters; including fields of expertise and related to topic ongoing projects (including project name, funder, amount, overlaps and links with current proposal)*

Tasks of the beneficiary and linked third parties in the project:

*Max. 1500 characters*

### **2.2. Beneficiary and/or Linked Third Party no. x**

Organization:

Responsible person at the organization:

Role of beneficiary/linked third parties in the project

*Max. 1000 characters; including fields of expertise and related to topic ongoing projects (including project name, funder, amount, overlaps and links with current proposal)*

Tasks of the beneficiary and linked third parties in the project:

*Max. 1500 characters*

### 3. Summarized project budget

*In k€ total budget; Please use XLS template for planning; see Annex 4. Short narrative explanation for each budget item listed in table 1 (max 800 characters incl. spaces plus Table 1). **Avoid outstanding “other costs”; costs that exceed 15% of the personnel costs** (please contact the Call Office [EJPCO@maapera.fi] in case outstanding costs are expected).*

Table 1: Summarized project budget

	Amount in k€
<b>Personnel costs</b>	
<b>Consumables</b>	
<b>Durable equipment</b>	
<b>Travel and subsistence</b>	
<b>Other costs<sup>#</sup></b>	
<b>Sub-contracting</b>	
<b>Indirect costs<sup>*</sup></b>	
<b>Total budget</b>	

*<sup>#</sup> Includes budget for communication, dissemination and exploitation activities; see for more information in the proposal template, section 6 “Communication strategy”.*

*<sup>\*</sup> Indirect costs: 25% of the total direct costs (personnel costs, consumables, durable equipment, travel and subsistence and other costs) minus subcontracting costs.*



#### 4. Description of the work

*Max 18.000 characters with spaces; in addition the work package descriptions and work plan that are part of section 4.2.*

##### 4.1. Relevance of the research proposal

*Objectives and main hypotheses*

*Relevance to the topic*

##### 4.2. Research Approach

*General approach and methodology*

*Brief description of the work plan*

*(including provisional project structure, work packages, work plan and collaboration among beneficiaries and/or linked third parties)*

Table 2: Work packages (WPs), start and end months (i.e. EJP SOIL months), and number of person months.

Work package	Lead participant*	Person-months	Start month*	End month*
WP1:			MXX	MXX
WP2:			MXX	MXX
WP3:			MXX	MXX
WP4:			MXX	MXX
WP5:			MXX	MXX
WP6:			MXX	MXX
WP7:			MXX	MXX
	<b>Total person months:</b>			

\* EJP SOIL months; M1 equals February 2020

Table 3: Descriptions of the work packages (WPs). The following pages contain tables detailing the participants (i.e. beneficiaries and linked third parties [LTP]), start and end months (i.e. EJP SOIL months; M1 equals February 2020), number of person months, objectives (OB), tasks (T) & deliverables (D) of each WP.

<b>Work package</b>	WP1:												
<b>Lead beneficiary or LTP</b>	full name (acronym)												
<b>Deputy leader</b>	full name (acronym)												
<b>Beneficiary no.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13

<b>Abbreviation</b>	INRAE	WR	BIOS	EV-ILVO	CRAW	CZU	AU	EMU	LUKE	Thuenen	Julich	ATK	Teagasc
<b>Person-months</b>													
<b>Beneficiary no.</b>	14	15	16	17	18	19	20	21	22	23	24	25	26
<b>Abbreviation</b>	CREA	UL	LAMMC	NIBIO	IUNG	INIAV	NPPC	ULBF	CSIC	SLU	AGS	TAGEM	AFBI
<b>Person-months</b>													
<b>LTP no.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Abbreviation</b>	AgroParisTech	Institut Agro	-/-	EAA	BOKU	AGES	BAW	BFW	EV INBO	VPO	ARC	CNR	ISPRA
<b>Person-months</b>													
<b>LTPno.</b>	14	15	16	17	18	19	20	21	22	23	24	25	26
<b>Abbreviation</b>	UNIPA	ENEA	AGRIS	ERSAF	AIS	UM-FKBV	-/-	-/-	-/-	-/-	-/-	-/-	-/-
<b>Person-months</b>													

<b>Start month</b>	<b>MXX</b>	<b>End month</b>	<b>MXX</b>	<b>Total person-months</b>	<b>XX</b>
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**Objectives**

- Describe the overall objective of the WP (max. 7 lines).
- List the specific objectives of the WP, including a descriptive but concise title, followed by a description.
- A commonly used approach, which helps to boost clarity, is link objectives directly to tasks, i.e. OB1.1 is dealt with by T1.1.

The specific objectives are to:

- **OB1.1: TITLE: DESCRIPTION**
- **OB1.2: TITLE: DESCRIPTION**
- **OB1.3: TITLE: DESCRIPTION**
- **OB1.4: TITLE: DESCRIPTION**
- **OB1.5: TITLE: DESCRIPTION**

**Description of work**

<ul style="list-style-type: none"> <li>• <b>Background:</b> Describe the state-of-the-art in the field(s) relating to the WP, in particular the starting basis for the work, and gaps that the WP will bridge (max. 8 lines, as it has already been outlined in <b>Section 4.1</b>).</li> <li>• <b>Approach:</b> Describe the overall approach adopted by the WP, in order for it to achieve its objectives (max. 8 lines).</li> <li>• <b>Tasks:</b> List the tasks (and subtasks), including a descriptive but concise title, followed by the task leader(s) and participants, and description, which should also clarify the roles of each participant.</li> <li>• <b>T1.1:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.2:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.3:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.4:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.5:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.6:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.7:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> <li>• <b>T1.8:</b> TITLE (<b>leader, co-leader, participants</b>): DESCRIPTION</li> </ul>
<b>Deliverables</b> (see Table 4)
<b>Milestones</b> (see Table 5)

<b>Work package</b>	<b>WPX:</b>
<b>Lead beneficiary or LTP</b>	full name (acronym)
<b>Deputy leader</b>	full name (acronym)

<b>Beneficiary no.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Abbreviation</b>	INRAE	WR	BIOS	EV-ILVO	CRAW	CZU	AU	EMU	LUKE	Thunen	Julich	ATK	Teagasc
<b>Person-months</b>													
<b>Beneficiary no.</b>	14	15	16	17	18	19	20	21	22	23	24	25	26
<b>Abbreviation</b>	CREA	UL	LAMMC	NIBIO	IUNG	INIAV	NPPC	ULBF	CSIC	SLU	AGS	TAGEM	AFBI
<b>Person-months</b>													
<b>LTP no.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Abbreviation</b>	AgroParisTech	Institut Agro	-/-	EAA	BOKU	AGES	BAW	BFW	EV INBO	VPO	ARC	CNR	ISPRA
<b>Person-months</b>													

LTPno.	14	15	16	17	18	19	20	21	22	23	24	25	26
Abbreviation	UNIPA	ENEA	AGRIS	ERSAF	AIS	UM-FKBV	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Person-months													
	Start month		MXX	End month		MXX	Total person-months				XX		
<b>Objectives</b>													
<ul style="list-style-type: none"> <li>Describe the overall objective of the WP (max. 7 lines).</li> <li>List the specific objectives of the WP, including a descriptive but concise title, followed by a description.</li> <li>A commonly used approach, which helps to boost clarity, is link objectives directly to tasks, i.e. OB2.1 is dealt with by T2.1.</li> </ul> <p>The specific objectives are to:</p> <ul style="list-style-type: none"> <li><b>OB2.1: TITLE: DESCRIPTION</b></li> <li><b>OB2.2: TITLE: DESCRIPTION</b></li> <li><b>OB2.3: TITLE: DESCRIPTION</b></li> <li><b>OB2.4: TITLE: DESCRIPTION</b></li> <li><b>OB2.5: TITLE: DESCRIPTION</b></li> </ul>													
<b>Description of work</b>													
<ul style="list-style-type: none"> <li><b>Background:</b> Describe the state-of-the-art in the field(s) relating to the WP, in particular the starting basis for the work, and gaps that the WP will bridge (max. 8 lines, as it has already been outlined in <b>Section 4.1</b>).</li> <li><b>Approach:</b> Describe the overall approach adopted by the WP, in order for it to achieve its objectives (max. 8 lines).</li> <li><b>Tasks:</b> List the tasks (and subtasks), including a descriptive but concise title, followed by the task leader(s) and participants, and description, which should also clarify the roles of each participant.</li> </ul> <p>The work will be conducted via the following tasks:</p> <ul style="list-style-type: none"> <li><b>T2.1:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.2:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.3:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.4:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.5:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.6:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.7:TITLE (leader, co-leader, participants): DESCRIPTION</b></li> <li><b>T2.8: TITLE (leader, co-leader, participants): DESCRIPTION</b></li> </ul>													
<b>Deliverables</b> (see Table 4)													
<b>Milestones</b> (see Table 5)													

Table 4: List the deliverables, including a descriptive but concise deliverable title, responsible participant, month of delivery, and description

Deliverable	WP	Month of delivery	Responsible participant	Title	Description
D1.1	1	MX			
D1.2	1	MX			
D1.X	1	MX			
D2.1	2	MX			
DX.X	X	MX			

Table 5: List the milestones, including a descriptive but concise milestone title, responsible participant, month of achieving milestone, and description.

Milestone	WP	Due month	Responsible participant	Title	Description
M1.1	1	MX			
M1.2	1	MX			
M1.X	1	MX			
M2.1	2	MX			
MX.X	X	MX			

Table 6: Example of a Gantt chart illustrating the timing of project’s tasks (T), deliverables (D) and milestones (M). The EJP SOIL annual work plans are based on a **monthly resolution**, which also applies to EJP SOIL internal call funded research project.

	1 <sup>st</sup> Annual period first work plan											
Months*	1	2	3	4	5	6	7	8	9	10	11	12
WP1												
T1.1												
D				X								
M				X								
T1.2												
T1.3												

\* EJP SOIL months; M1 equals February 2020

WP: Work package

### 4.3. Impact

*Expected impact (considering cross-cutting issues: multi-actor/ multi-disciplinary and system approach)*

*Innovation potential (ambition and novelty in relation to the state of the art)*

*Added value of the transnational collaboration and geographical relevance*

## **5. Ethical issues**

*Indication that the research project is carried out in accordance with the European Union, the respective national (Chapter 5 and Annex 5 “Self-assessment”), and the EJP SOIL’s requirements. Proposals that do not include all the compulsory information or do not meet the formal requirements of the Call announcement will not be considered for funding.*

*Address any of the ethical issues listed in Annex 5 that are expected to arise during the proposed project. In max. 6000 characters with spaces.*

## **6. Communication and dissemination strategy**

*On the basis of an internal EJP SOIL communication and dissemination services and tools (see section “Communication and dissemination”) the applicants should consider the following communication and dissemination options during communication plan preparation (in max 6000 characters with spaces):*

- *Describe how the funded research is relevant for particular stakeholders;*
- *Specify how the project will engage and interact with these on both national and European level;*
- *Specify communication, dissemination and knowledge exchange activities such scientific papers, articles, posters, course or training material, web-based tools, as workshops or field days;*
- *Specify activities including (co)organizing national workshops in member states funding the project;*
- *Specify how they will draw upon relevant professional assistance from WP9 and National Communication Representatives to secure communication, dissemination and exploitation activities;*
- *Appoint a Project Communication Representative who will be responsible for communication, dissemination and exploitation activities in the project;*
- *Include summarized budget lines for communication, dissemination and exploitation activities.*

## **7. Data management strategy**

*Describe how the research data in this project will be findable, accessible, interoperable and re-usable (FAIR) (in max 6000 characters with spaces):*

- *Describe the handling of research data during and after the end of the project;*
- *Specify what data will be collected, processed and/or generated and/or reused;*

- *Specify which methodology and standards will be applied;*
- *Specify whether data will be shared/made open access;*
- *Specify how data will be curated and preserved (including after the end of the project).*

## **8. References**

*Please use citation style of the European Journal of Soil Science*  
[\(<https://onlinelibrary.wiley.com/journal/13652389>\)](https://onlinelibrary.wiley.com/journal/13652389)

The closing date for complete and timely submission of proposals is 31<sup>st</sup> May 2022 in M28 – 23:59 CET. Applications should be submitted via the EJP SOIL's proposal submission system ([Link](#)).

#### **Annex 4: Template for proposal budget**

Please, visit the EJP Website ([www.ejpsoil.org](http://www.ejpsoil.org)) to retrieve the budget sheet template in Excel format. **Please submit Annex 4 as an Excel document, NOT as a PDF.**

##### Important notices regarding budget plan

- The template file is composed of several spreadsheets, one summary budget spreadsheet and as many other spreadsheets as cost items.
- Where necessary complete the yellow cells in each relevant spreadsheet
- For each cost budgeted, describe it and refer to the corresponding task(s) of the project (See Annex 3, section 3)
- Complete one file consisting of annual budget plans to be summarized in an overall data sheet.
- Name each file as:
  - Project acronym
  - Institute name
  - Project year (Y)
  - E.g.: xxxxx\_Y1
- Contact the Call Office for any further clarification needed ([EJPCO@maapera.fi](mailto:EJPCO@maapera.fi))



## Annex 5. Ethics self-assessment

Please see the EJP SOIL Website ([www. EJPSOIL.eu](http://www.EJPSOIL.eu)), to retrieve the excel sheet for Ethics Self-Assessment.

<b>EJPSOIL Ethics Self-Assessment</b>			
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Instructions:            Each candidate EJP SOIL leader must complete this questionnaire.            For guidance, please use the guidance document.            Send the completed form to EJPfirstcall@luke.fi together with your full proposal.</p> </div>			
<b>1</b>	<b>HUMANS</b>		
	Does your research involve human participants?	Yes	No
	Are they providing sensitive or personal information?	Yes	No
	Are they volunteers for social or human sciences research?	Yes	No
	Are they persons unable to give informed consent?	Yes	No
	Are they vulnerable individuals or groups?	Yes	No
	Are they children/minors?	Yes	No
	Are they patients?	Yes	No
	Are they healthy volunteers for medical studies?	Yes	No
	Are they residents in a non-EU country?	Yes	No
	Does your research involve physical interventions on the study participants?	Yes	No
	Does it involve invasive techniques?	Yes	No
	Does it involve collection of biological samples?	Yes	No
<i>If your research involves processing of genetic information or collecting personal data, see also section 4</i>			
<b>2</b>	<b>PERSONAL DATA</b>		
	Does your research involve personal data collection and/or processing?	Yes	No
	Does it involve the collection and/or processing of sensitive personal data (e.g.: health, sexual lifestyle, ethnicity, political opinion, religious or philosophical)	Yes	No
	Does it involve processing of genetic information?	Yes	No
	Does it involve tracking or observation of participants?	Yes	No
	Does your research involve further processing of previously collected personal data (secondary use)?	Yes	No
<b>3</b>	<b>ANIMALS</b>		
	Does your research involve animals?	Yes	No
	Are they legally protected animals?	Yes	No
	Are they vertebrates?	Yes	No
	Are they non-human primates?	Yes	No
	Are they genetically modified?	Yes	No
	Are they cloned farm animals?	Yes	No
	Are they endangered?	Yes	No
<i>Please indicate the species involved (Maximum number of characters allowed: 1000)</i>			
<b>4</b>	<b>THIRD COUNTRIES*</b>		
	In case non-EU countries are involved, do the research related activities undertaken in these countries	Yes	No
	Specify the countries involved:(Maximum number of characters allowed: 1000)		

	Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)?	Yes	No
	Do you plan to import any material - including personal data - from non-EU countries into the EU?	Yes	No
	Specify material, countries and legal permissions involved: (Maximum number of characters allowed: 1000)		
	Do you plan to export any material - including personal data - from the EU to non-EU countries?	Yes	No
	Specify material, countries and legal permissions involved: (Maximum number of characters allowed: 1000)		
	If your research involves low and/or lower middle income countries, are benefits-sharing actions planned?	Yes	No
	Do you plan to use biological resources that are subject to Access and Benefit Sharing (Nagoya Protocol) Regulations (Regulation (EU) No.511/2014; Implementing Regulation (EU) 2015/1866)	Yes	No
	Specify material and countries: (Maximum number of characters allowed: 1000)		
	Could the situation in the country put the individuals taking part in the research at risk?	Yes	No
<b>5</b>	<b>ENVIRONMENT &amp; HEALTH and SAFETY</b>		
	Does your research involve the use of elements that may cause harm to the environment, to animals or plants?	Yes	No
	Does your research deal with endangered fauna and/or flora and/or protected areas?	Yes	No
	Does your research involve the use of elements that may cause harm to humans, including research stuff?	Yes	No
<b>6</b>	<b>DUAL USE</b>		
	Does your research involve dual-use items in the sense of Regulations 428/2009, or other items for which an authorization is required?	Yes	No
<b>7</b>	<b>EXCLUSIVE FOCUS ON CIVIL APPLICATIONS</b>		
	Could your research raise concerns regarding the exclusive focus on civil applications?	Yes	No
<b>8</b>	<b>MISUSE</b>		
	Does your research have the potential for misuse of research results?	Yes	No
<b>9</b>	<b>OTHER ETHICS ISSUES</b>		
	Are there any other ethics issues that should be taken into consideration?	Yes	No
	Please specify (maximum number of characters allowed: 1000)		
I confirm that I have taken into account all ethics issues described above and that I will comply with the regulation as set out in the Grant Agreement (i.e. Art 34) before the start of any activity in which ethics issues apply		I confirm: yes or no	
Document completed by			
Date			
Signature			

\* Norway, Switzerland and UK (i.e. changes will be communicated via WPs 1 and 3) are within the European Economic Area (EEA); therefore covered by the GDPR and its provisions. The only non-EU country is Turkey, which requires additional consultation of Turkish colleagues to manage personal data protections issues.

## Annex 6. Certificate of co-financing

### To be submitted after selection.

This template should be used for participants of selected research projects in order to provide evidence of their commitment. Grey-marked fields must be duly completed. This document must be signed by an authorized representative of the organisation. A template for each participant organization is required.

In case of failure in proving such commitment, a participant could be regarded as ineligible, jeopardizing the whole research consortium.

EJP SOIL Call Office Organisation Name Street Town Country	Address of organisation Name of contact person
<b>EJP SOIL – 3<sup>rd</sup> Internal Call for research proposals 2022</b> <b>Certificate of co-financing</b> <b>Project title: ...</b>	
Place, date	
We hereby confirm that <b>organisation</b> has sufficient resources and is committed to participate to the <b>project title</b> , in accordance to the proposal which is submitted by coordinator in the frame of the EJP SOIL – 3 <sup>rd</sup> Internal Call 2022 and in case the proposal is validated for funding by the Board of Programme Managers.	
<i>In addition, in case of separate source of funding:</i> Please find attached to this letter a commitment from <b>funding organisation</b> for our contribution to this project.	
Signature of <b>Name and affiliation</b>	

## Annex 7. Letter of commitment by the project coordinator

### To be submitted after selection.

This template may be signed by project coordinators of selected research projects in order to provide evidence of their commitment. Grey-marked fields must be duly completed.

In case of failure in proving such commitment, a project could be regarded as ineligible.

EJP SOIL Call Office Organisation Name Street Town Country	Address of organisation Name of Project Coordinator
<b>EJP SOIL – 3<sup>rd</sup> Internal Call for research proposals 2022</b> <b>Letter of commitment by Project Coordinator</b> <b>Project full title: ...</b> <b>Project acronym: ...</b>	
Place, date	
<p>I hereby confirm that in my capacity of the <b>project title</b> Project Coordinator, that <b>project title</b> will be implemented in accordance to the proposal submitted to the EJP SOIL Call Office and validated by the Board of Programme Managers in the frame of the EJP SOIL – 3<sup>rd</sup> Internal Call 2022.</p> <p>I hereby acknowledge that <b>project title</b> will be included in the relevant EJP SOIL's Annual Work Plans that cover the complete duration of the project. As such, the <b>project title</b> will follow the rules of H2020, and the EJP SOIL Grant Agreement and Consortium Agreement with respect to scientific and financial management, data management, personal data protection, financial and technical reporting, and legal aspects such as access rights, dispute resolution and Intellectual property rights.</p> <p>The relationship among the Parties, in particular concerning the organisation of the work between the Parties, the management of the Project and the responsibilities and obligations of the Parties are defined in the full project proposals provided as attachment to this letter.</p>	
<b>Signature of Project Coordinator</b> <b>Name and affiliation</b>	